



# OEKO-TEX® INTRODUCES NEW CARBON AND WATER FOOTPRINT TOOL FOR FACILITIES

## It's time the Fashion Industry takes action on Climate & Water

The apparel sector is a key contributor to global emissions - and must take action now. Limiting global warming to 1.5°C requires rapid and measurable action at scale. Production facilities have a critical role to play in achieving the industry's goals to reduce water usage and carbon

emissions 30% by 2030.<sup>1</sup>

In addition, water risk is growing and today the apparel sector is underperforming on measuring and monitoring water impact.<sup>2</sup> Consumers and brands alike are increasingly selecting products and companies that demonstrate action and make commitments on key environmental topics like water usage and climate change.

HELPING TEXTILE FACILITIES  
ACHIEVE GOAL OF 30% GHG  
EMISSIONS REDUCTION BY 2030

OEKO-TEX®  
INSPIRING CONFIDENCE

## INDUSTRY CHALLENGES HIGHLIGHT THE NEED FOR A CARBON AND WATER FOOTPRINT TOOL

- 1 The Business Need**  
Understanding and reporting carbon emissions and water usage across the various production stages will likely be a standard requirement of every business in the future.
- 2 The Reporting Challenge**  
The complexity and differences across global value chains and production processes in the textile industry make the task of gathering robust environmental data very challenging.
- 3 A New Solution**  
OEKO-TEX® is launching a Carbon and Water Footprint Tool to provide production facilities an initial estimate and assessment on the materials and process steps that contribute most to their overall environmental impact.



<sup>1</sup> UNFCCC Fashion Industry Charter for Climate Action, 2018 ([link](#))

<sup>2</sup> CDP Global Water Report, 2018 ([link](#))

# OEKO-TEX® ROADMAP TOWARDS EXCELLENCE

The STeP by OEKO-TEX® certification program is constantly evolving to meet changing industry requirements and to provide benchmarking and continuous improvement guidance.

## Screening Life Cycle Assessment (LCA) for Facilities

Production facilities need simple, efficient, and credible tools to measure and report on their environmental impacts. This is why we opted for a Screening LCA.

OEKO-TEX® has partnered with Quantis, a leading science-based sustainability consultancy, to develop a transparent methodology and data models to help facilities quantify their carbon and water impacts.

As facilities enter their data into the online tool, their real data inputs will be used to update initial data assumptions. These iterative improvements will contribute to building a benchmark and one of the most robust climate impact databases in the industry.

The tool's output gives facilities first insights into carbon emissions and water usage at the facility level and per kg of material produced. It calculates impacts by production process step vs. impacts generated outside a facility's direct influence, such as raw material production and transportation.

This enables facilities to identify the biggest opportunities for carbon emission and water reductions - whether to change materials purchased or improve operations.

## BENEFITS FOR FACILITIES



### Understand

production-related carbon emissions and water usage



### Identify

which processes have the highest environmental impacts



### Act

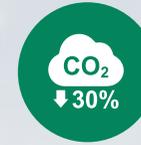
to reduce carbon and water usage in the future



### Report

results and reduction measures to customers

## Industry Objectives



Support the fashion industry goal of 30% reduction in carbon emissions by 2030.<sup>1</sup>



Reduce industry's impact on water.<sup>2</sup>



## Screening Life Cycle Assessment (LCA) for Facilities

### Aligned with the Sustainable Development Goals (SDGs)



### Value-add for Facilities

- Demonstrate leadership
- Strengthen trust
- Grow business



### Carbon Footprint



### Water Footprint

## 1. DEFINED SCOPE

Guided by Principles of Screening LCA

As there is no standard for production facilities nor market appetite for an expensive full Life Cycle Assessment (LCA), our approach followed five principles of a Screening LCA:



## 2. GATHERED STAKEHOLDER INPUT

Identified 100+ Activities and Inputs & Outputs / Activity

Together with industry experts, over 100 key production activities with corresponding inputs and outputs were identified and categorized:

- MAIN CATEGORIES:**
- Yarn Production
  - Fabric Manufacturing
  - Pre-Treatment
  - Drying
  - Dyeing
  - Washing
  - Printing
  - Finishing
  - Making-up

- INPUTS/OUTPUTS:**
- Electricity
  - Steam
  - Water
  - Chemicals
  - Packaging
  - Transportation
  - Wastewater
  - Waste Packaging

## OUR APPROACH

The diagram explains the rigorous process undertaken to develop the Carbon and Water Footprint Tool for STeP by OEKO-TEX® certified facilities.

## 3. SELECTED METHODOLOGIES

Combined Product and Corporate LCA Methodologies

Our approach is aligned with the requirements described in the following standards:

**Product LCA based on ISO 14040 and PEF**  
— for materials used

**Corporate Water Footprint based on AWARE**

**Corporate Carbon Footprint based on IPCC 2013**  
— for production related impacts

## 4. IDENTIFIED DATA SOURCES

Incorporated Relevant Datasets

The datasets and models leverage inputs from vetted data sources and credible industry databases to provide “best of” industry averages:

- DATA SOURCES:**
- OEKO-TEX® anonymized STeP customer data
  - OEKO-TEX® experts' data on textile production

- DATABASES:**
- **WALDB** – environmental data on fibre production and textile processing steps (see Step 2 “Main Categories”)
  - **ecoinvent v 3.5** – global/regional/country level data on:
    - Electricity
    - Steam
    - Packaging
    - Waste
    - Chemical
    - Transport

## 5. DEVELOPED “PROOF OF CONCEPT”

Designed Carbon & Water Footprint Model

The tool enables facilities to input real data. If datapoint is unknown, the model selects the respective default data, then calculates the emissions and water usage.

- INPUT CATEGORIES:**
- Country Location
  - Facility Boundaries
  - Materials Processed (inputs & outputs)
  - Inventory per Facility
  - Transportation

- RESULTING OUTPUT:**  
Carbon emissions and water reported:
- per facility
  - per processing step
  - from “sourcing origin”
  - per yearly production reported:
  - per 1 kg of material output

## 7. ITERATED MODEL

Continuous Improvement

The tool is built so that future updates can easily be made in various areas:

- Datasets
- Explanations
- User Experience

## 6. TESTED MODEL

Five Test Locations

To ensure global applicability, the tool was tested in key textile markets:

- India
- Hungary
- Switzerland
- Italy
- Germany
- More to come

